



# Remote Sensing Applications Division (RSAD)

## CDR Program Office

Weekly Report for Oct 17, 2014  
Ed Kearns, Chief

S t a t u s	CDR  PI TM		Assessment		Deliver Drafts						Review and Provide Feedback						Deliver Final Versions						Misc		Archive			Release				
			Assemble IPT	Perform Assessment	Deliver source code sample and README draft	Deliver Flow Diagram Draft	Deliver C-ATBD Draft	Deliver Maturity Matrix Draft	Deliver Sample netCDF dataset	Deliver SA Draft	Provide feedback on source code and README	Provide feedback on Flow Diagram Draft	Provide feedback on C-ATBD Draft	Provide feedback on Maturity Matrix Draft	Provide feedback on Sample netCDF dataset	Provide feedback on SA Draft	Deliver final source code and README	Deliver final Flow Diagram	Deliver final C-ATBD	Deliver final Maturity Matrix	Deliver final netCDF dataset	Deliver final SA	Create Collection Level Metadata	Conduct Security Review	Archive Code Package	Archive Docs	Archive Data	Make data publicly available	Put data, docs, and code on dev web page	Conduct ORR		
1	Ozone - ESRL	Rosenlof Young	x	x	20-May	12-Jun	20-Mar	20-Aug	30-Oct 4-Apr	12-Jun	12-Jun	26-Jun	27-Mar	21-Aug	6-Jan 12-Jun 5-Aug	21-Aug		21-Aug	19-Aug	11-Sep						7-Oct					FY15	
2a	SST - WHOI	Clayson Peng	x	21-Feb	12-Dec	3-Apr	20-May	19-Feb	25-Nov	8-Aug	16-Dec	8-Aug	6-Jun		13-Dec	13-Aug						19-Sep									FY15	
2b	Ocean Surface Properties	Clayson Peng	x	21-Feb	12-Dec	3-Apr	20-May	19-Feb	25-Nov	8-Aug	16-Dec	8-Aug	6-Jun		13-Dec	13-Aug						19-Sep									FY15	
2c	Ocean Heat Fluxes	Clayson Peng	x	21-Feb	12-Dec	3-Apr	20-May	19-Feb	27-Jun	8-Aug	16-Dec	8-Aug	6-Jun		8-Aug	13-Aug						19-Sep									FY15	
3a	Cryosphere (APP FCDR)	Key Young	13-Jun	IP 20-Dec	3-Jun		20-Mar 25-Sep	12-Mar	12 Mar 27 Jun		27-Aug		25-Apr	20-Mar	25-Apr		18-Sep														FY15	
3b	Cryosphere (APP-x TCDR)	Key Young	13-Jun	IP 20-Dec	3-Jun		20-Mar 18-Sep	12-Mar	12 Mar 27 Jun		27-Aug		25-Apr	20-Mar	25-Apr		18-Sep															FY15
4a	AVHRR FCDR (5 CHs)	Minnis Young	x	22-Nov		14-Feb	31-Dec 28-Mar	7-Feb	14-Feb	20-Dec 31-Jul		21-Feb	13-Feb 2-Jun	14-Feb	18-Feb	19-Jun					1TB /day					60 TB CLASS					FY15	
4b	AVHRR Cloud Properties - NASA	Minnis Young	x	22-Nov		14-Feb	31-Dec 28-Mar	7-Feb	14-Feb	20-Dec 31-Jul		21-Feb	13-Feb 2-Jun	14-Feb	18-Feb	19-Jun					1TB /day					60 TB CLASS					FY15	
5	Vegetation (LAI/FAPAR)	Vermote Matthews	x	17-Jan	24-Jun	2-Jul	10-Sep	10-Sep	16-Jul	6-Nov	29-May	9-Jul	17-Sep	11-Sep		8-Nov		1-Nov													FY15	
6a	Cloud Top Pressure	Menzel Young	x	31-Jan	1-Oct	5-Aug	15-May	5-Aug	21-Oct 11-Jul 25-Jul	21-Sep	29-Oct	29-Oct	29-Oct 10-Jan		4-Nov 24-Jul		2-Oct				NCDC creating										FY15	
6b	Total Precipitable Water	Menzel Young	x	31-Jan	1-Oct	5-Aug	15-May	5-Aug	21-Oct 11-Jul 25-Jul	21-Sep	29-Oct	29-Oct	29-Oct 10-Jan		4-Nov 24-Jul		2-Oct				NCDC creating										FY15	
7a	Total Solar Irradiance	Pilewskie Inamdar	x	6-Mar	22-Jan	26-Mar	25-Sep	26-Mar	25-Sep	Approved to Archive	9-May	11-Apr	6-Oct		9-Oct																FY15	
7b	Solar Spectral Irradiance	Lean Inamdar	x	6-Mar	22-Jan	26-Mar	25-Sep	26-Mar	25-Sep	Approved to Archive	9-May	11-Apr	6-Oct		9-Oct																FY15	
8	GPCP Monthly	Adler																													FY15	
9	NEXRAD	Nelson Nelson			See	Project	Quad	Chart																							FY15	
10	CMORPH	Xie Prat	x																												FY15	
11	ISCCP	Rossow Knapp	x	x	See	Project	Quad	Chart																							FY15	

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1	Ozone - ESRL	Rosenlof Young	1) Final documents in Library; Finalized Overview Flyer; <b>working ORR Checklist</b>																												FY15
2a	SST - WHOI	Clayson Peng	2a) Still waiting on final C-ATBD; received images for flyers and metadata thumbnails ; drafted discovery metadata																												FY15
2b	Ocean Surface Properties	Clayson Peng	2b) <b>Scheduled UESB presentation Dec</b>																												FY15
2c	Ocean Heat Fluxes	Clayson Peng	2c) Completed processing, tested sftp, DSRR held 10/01 – Failed for too many small files																												FY15
3a	Cryosphere (APP FCDR)	Key Young	3a) Feedback sent on metadata; Held IPT																												FY15
3b	Cryosphere (APP-x TCDR)	Key Young	3b) Received updated drafts on both C-ATBDs																												FY15
4a	AVHRR FCDR (5 CHs)	Minnis Young	4a) Change in sftp server – need to retest data transfer; NASA code review in progress - needed before release to NCDC																												FY15
4b	AVHRR Cloud Properties - NASA	Minnis Young	4b) IR calibration issue is to difficult (postponed to future enhancements and annotated in C-ATBD)																												FY15
5	Vegetation (LAI/FAPAR)	Vermote Matthews	5) PI needs OLE code from U of Miami to create their daily operational code; <b>received second draft C-ATBD</b>																												FY15
6a	Cloud Top Pressure	Menzel Young	6a) ATRAC request for L1B PATMOS input data (12.5 TB), <b>final code delivery had error – on hold for new code delivery</b>																												FY15
6b	Total Precipitable Water	Menzel Young	6b) Received sample data, it's looking good; final dataset (3 TB)																												FY15
7a	Total Solar Irradiance	Pilewskie Inamdar	7a) <b>Received draft C-ATBD, sample data, and code package</b>																												FY15
7b	Solar Spectral Irradiance	Lean Inamdar	7b) <b>Provided feedback on C-ATBD, data, and code; IPT scheduled for 10/10</b>																												FY15
8	GPCP Monthly	Adler	8) On Hold																												FY15
9	NEXRAD	Nelson Nelson	9) See Project Quad Chart																												FY15
10	CMORPH	Xie Prat	10) On Hold																												FY15
11	ISCCP	Rossow Knapp	11) See Project Quad Chart																												FY15

			Assessment		Deliver Drafts					Review and Provide Feedback						Deliver Final Versions					Misc		Archive			Release				
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12	Sea Ice Concentration - Daily	Fetterer Peng	x	PI says NO deliverables	12) PI using current funds to modularize existing code; development on SIC-Daily in FY15 via a subcontract to GST																									FY16
13a	Hydrological Bundle	Ferraro Nelson																												FY16
13b	AMSU-A FCDR	Ferraro Nelson																												FY16
13c	AMSU-B FCDR	Ferraro Nelson																												FY16
14	Sea Level	Callahan Zhang																												FY16
15	Mean Layer Temperature - NOAA	Zou Semunegus																												FY16
16	Tropospheric Height	Ho Shi																												FY16
17	Surface Albedo	Matthews			See	Project	Quad	Chart																						FY17
18	UTH Related FCDR	Lou																												FY17
19	AVHRR + HIRS Cloud TCDR	Heidinger Knapp																												FY17
20	ISCCP Eney Budget	Zhang																												FY17
21a	GPCP Daily	Adler																												FY17
21b	GPCP Pentad	Adler																												FY17
22	Ozone	Long																												FY17



## CDRP Open Change Requests

Name of CDR	C-ATBD	Data Flow Diagram	Maturity Matrix	VDD	Source Code	NetCDF sample	Dataset	Request to Archive	Approved for Archive	SA	DSRR
Geostationary IR Channel Brightness Temperature - GridSat B1	Returned to PI with edits	Needed, TBD	Needed, TBD	N/A	✓	✓	✓	✓	✓	✓	Aug-13
Sea Surface Temperature - Pathfinder	Returned to PI with edits	No change	No change	✓	✓	✓	Having QA issues, will not be delivered until end of CY 2014	✓	✓	Needed, TBD	Needed, TBD
Mean Layer Temperature - UAH	Delivered 9/4/2014, returned to PI for edits	31-Jul	N/A	Needed, TBD	10-Aug	10-Aug	Needed, TBD	Needed, TBD	Needed, TBD	Needed, TBD	Needed, TBD

## GST FY14 Subcontracts

PI	CDRs	Start Date	End Date	WA Complete	Sent to Institution for Review	Sub-contract in place
Christy	Mean Layer Temperature - UAH	15-Sep-14	31-Mar-15	√	√	√
Ho	- Mean Layer Temperature - UCAR (Lower Stratosphere) - Mean Layer Temperature - UCAR (Troposphere and Stratosphere) - Tropopause Height Climatology	17-Sep-14	31-Mar-15	√	√	
Robinson	Snow Cover Extent (Northern Hemisphere)	11-Sep-14	31-Mar-15	√	√	√
Sorooshian	Precipitation - PERSIANN-CDR	1-Aug-14	31-Mar-15	√	√	√
Zhang	ISCCP Radiation Budget	1-Aug-14	31-Mar-15	√	√	√
Wentz	SSM/I(S) Brightness Temperature - RSS	14-Sep-14	31-Mar-15	√	√	√
Mears	Mean Layer Temperature - RSS	14-Sep-14	31-Mar-15	√	√	√



# CDR Program Office

## OISST Rejuvenation Project

Team Lead:  
Drew Saunders

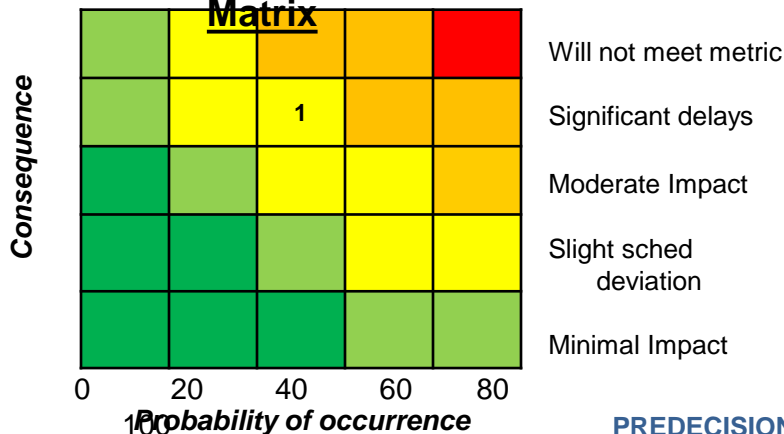
### Weekly Report – October 17, 2014

#### 1 ISST – Optimum Interpolated Sea Surface Temperature

- Verifying results of final product test runs .
- Much of week spent on operational data issues (Navy SST).
- Updating schedule Working FOC estimate.
- DEV container created.
- Performing dry runs for the System Acceptance Test (SAT).
- Draft OISST Transition to Operations Project Plan.
- Successfully completed 30 day parallel test.
- Comparing NCDC GTS with NCEP ship/buoy data for use. GCAD is resolving issues but requires new operational code.
- AVHRR data for the 15 day delay product is available from CLASS.
- GSTWG discussing inputs and production of preliminary OISST.
- Created a SOP for operational OISST.
- Completed refactoring of each component.
- Conducted Technology Assessment Review.

Monitor Project	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	NOV
Test																
Dry Run SAT																
Setup DEV																
Verify DEV																
Setup TEST																
Dry Run TEST																
SAT																
FOC																
Reprocessing																
SAs																
SLA																
OAD																

### Risk Matrix

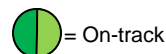


### Risk and Mitigation

1 Time to progress through the three tier environment. ITB support is required.

10/16/2014

PREDECISIONAL DRAFT INFORMATION



= On-track      = Potential management action required      = Management attention required



# CDR Program Office

## Ingest Monitoring Tool

Team Lead:  
Linda Copley

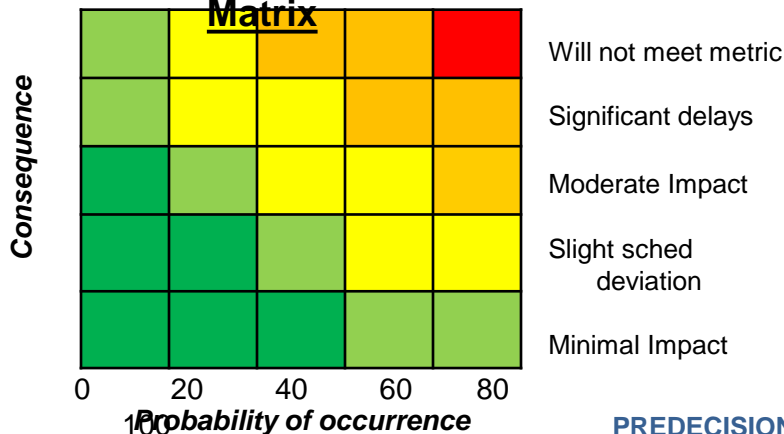
### Weekly Report – October 17, 2014

#### 1 Operations Monitoring Tool development

- Utilizing SIPGenSys infrastructure.
- Conducted initial monitor meeting with SIPGenSys team.
- Designing module to collect status data from iRODS.
- Working on database design.
- Defined requirements for Phase 1 of the project.
- Phase 1 implements basic functionality.
- Additional datasets can be added in later phases.
- Updated the monitoring project plan.
- Monitoring of operational ingest.

Monitor Project	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	NOV
Phase 1																
Status View																
Dashboard																
Email Notification																
Phase II																

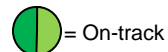
### Risk Matrix



### Risk and Mitigation

PREDECISIONAL DRAFT INFORMATION

10/16/2014



= On-track      = Potential management action required      = Management attention required





# CDR Program Office

## Federated Archive Search Tool (FAST)

Team Lead:  
Linda Copley

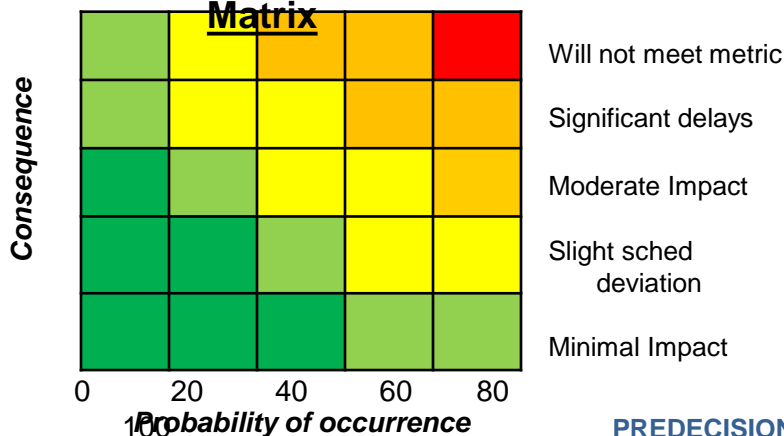
### Weekly Report October 17, 2014

#### 1 Federated Archive Search Tool proof-of-concept

- **Worked C-RDR issues and vacation.**
- **Investigating Hollings Scholar intern opportunity.**
- **Working on application to demonstrate query capabilities.**
- Connected all data to geographic and date references.
- Designed and loaded VIIRS catalog graph data.
- Designed and loaded Storm Events graph data.
- Loaded FIPS geographic data.
- Installed Neo4j graph database with spatial extension.

Monitor Project	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	NOV
Proof-of-concept																
Demonstrate																
Analysis																
Recommendation																

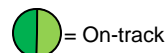
### Risk Matrix



### Risk and Mitigation

PREDECISIONAL DRAFT INFORMATION

10/16/2014



= On-track      = Potential management action required      = Management attention required



# CDR Program Office

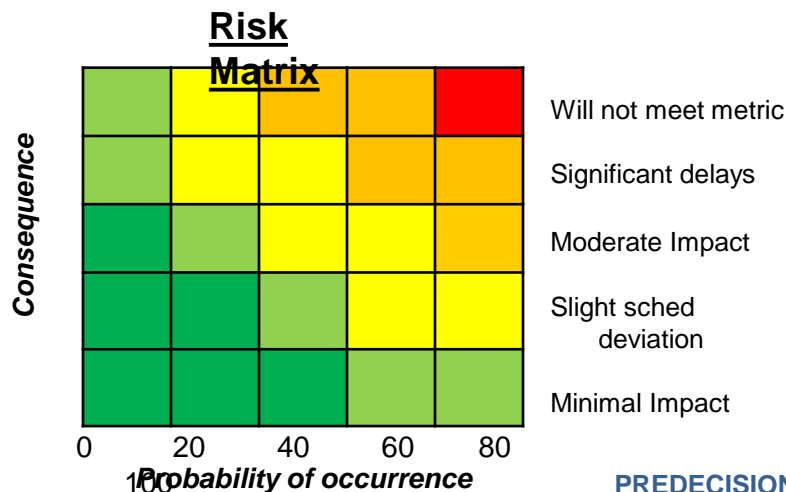
## Reprocessing VIIRS SDRs

Team Lead:  
Jim Biard

### Weekly Report – October 17, 2014

#### 1 Reprocessing VIIRS SDRs

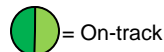
- **Currently working Obs4MIBs (testing translator).**
- Defined schedule estimates for project.
- Talking with STAR scientists (Changyong Cao, etc) to identify parallelization capability of VIIRS algorithms.
- Developed draft white paper to identify issues and scope.
- Have identified parts of the algorithm that need to 'conditioned' during runtime and will affect reprocessing estimates.
- Discussed scope and goals of the project with CDRP scientist.



### Risk and Mitigation

10/16/2014

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= On-track      = Potential management action required      = Management attention required



# CDR Program Office

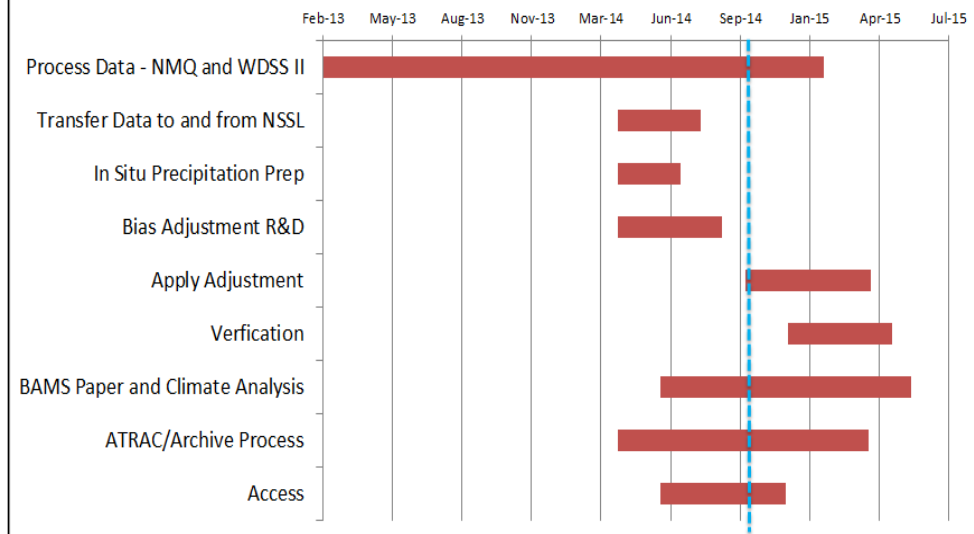
## NOAA NEXRAD Reanalysis

Project Manager:  
B. Nelson

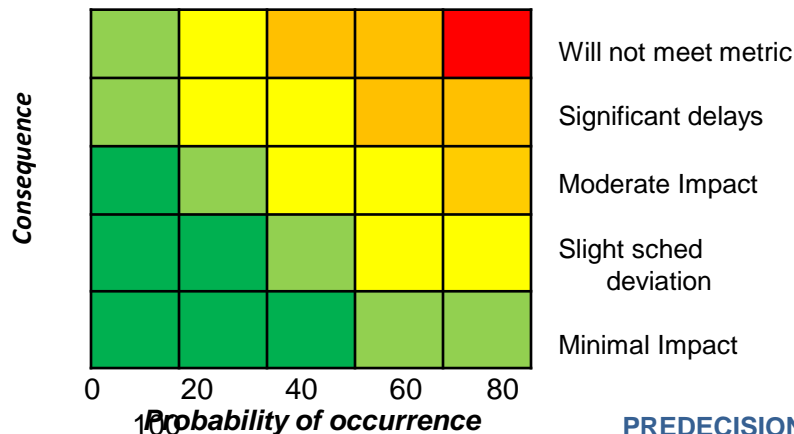
### Weekly Report

#### **NNR – NOAA NEXRAD Reanalysis**

- Radar only reprocessing is finished
- Still investigating the COOP obs time issue
- Re-do daily gauge-radar processing to consider obs time for COOP data.
- Hourly data for HADS locs has been processed for 4 full years
- 2003 radar only processing
- 2005 radar only processed
- Assessment of Bias at Hourly for 2 months (4 years)
- Assessment of Bias at Daily scale for 4 years (2008 - 2011)
- Gauge radar merging for one year (2011)
- 2005 radar only processed



### Risk Matrix

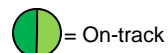


### Risk and Mitigation

No Risk at this time

PREDECISIONAL DRAFT INFORMATION

10/9/2014



= On-track

= Potential management action required

= Management attention required



# CDR Program Office

## ISCCP Processing @ NCDC

Project Manager:  
A. Young/K. Knapp

### Weekly Status Update

- Continuing to pre-process data.
- Ordering replacement data from EUMETSAT
- Sent beta data to users for feedback.
- Preparing ancillary calibration data for processing.
- Working on ISCCP Website for NCDC
- Preparing data for Beta users (preliminary output)
- Prepared space and scripts for ISCCP processing on CICS server.
- Received pre-processing software to QC input files (GEO/B1 & LEO/AVHRR)

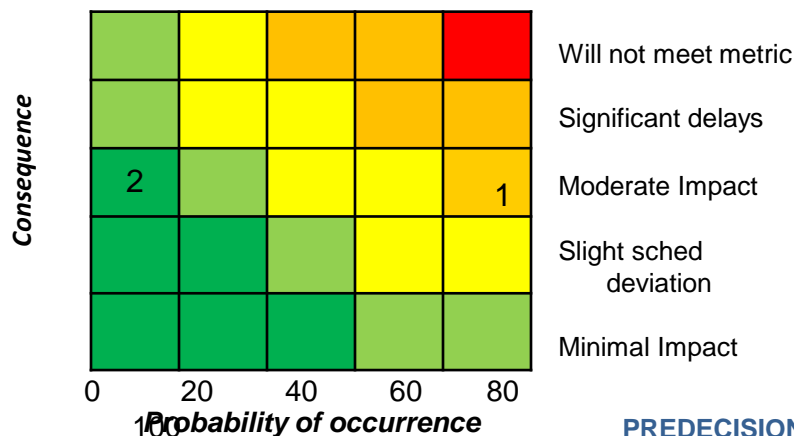
### Objectives

Produce ISCCP cloud products at NCDC following IOC R2O procedures. Plan for routine updates to follow.

### Schedule

- |                         |                   |
|-------------------------|-------------------|
| • Start Date            | 1983? 2003? 2013? |
| • Begin processing      | September 2014    |
| • End processing        | December 2014     |
| • QC & Analysis         | Jan-Feb 2015      |
| • Archive               | March 2015        |
| • Routine updates start | June 2015         |

### Risk Matrix

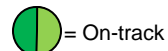


### Risk and Mitigation

- Delivery of software late and other delays. **Raised level to moderate impact. Processing will likely start 1 month late. Impact upon completion isn't yet clear.**
- CICS server space

PREDECISIONAL DRAFT INFORMATION

8/7/2014



= On-track



= Potential management action required



= Management attention required



# CDR Program Office

## Obs4MIPS

Project Manager:  
H. Semunegus

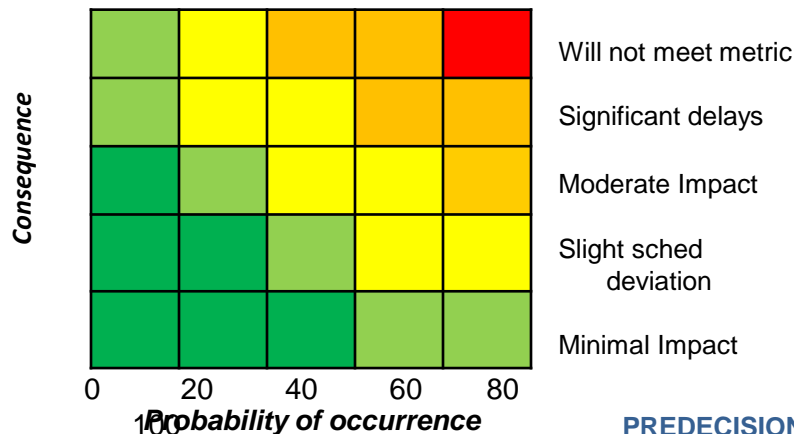
### Weekly Status Update

- J. Baird prototyped a conversion utility.
- Scoping out a potential third dataset for initial transition.
- Test data was converted to Obs4MIPS format.
- Planning meeting completed and schedule revised.
- Initial datasets selected for Obs4MIPS: OISST and OLR
- Lots of emails and investigations ongoing.
- Many CDRs can't work in Obs4MIPS: all FCDRs and all Mean Layer Temperatures aren't fit for this purpose.
- Kickoff meeting held 7/18
- Initial plans developed.

Initial datasets: Daily OLR, OISST, Sea Ice

Obs4MIPS using CDRs (Project Manager: Hilawe Semunegus)					2014												2015											
Task (team member)	Start Date	End Date	Duration (days)	Percent Complete	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1.1 Present project plan and time commitment to team members (all)	2014-07-15	2014-07-31	17	100%																								
1.2 Select 3 CDRs for Obs4MIPS conversion (all)	2014-07-15	2014-07-31	17	50%																								
1.3 Assess uncertainty estimates for selected CDRs based on CATBDs (J. Matthews)	2014-07-15	2014-07-31	17	0%																								
1.4 Assess time commitment for writing a "Technical Note Template" (SMEs); <a href="https://www.eearthsystemscg.org/site_media/projects/obs4mips/Obs4MIPS/TechnicalNoteGuidance/3.pdf">https://www.eearthsystemscg.org/site_media/projects/obs4mips/Obs4MIPS/TechnicalNoteGuidance/3.pdf</a>	2014-07-15	2014-07-31	17	0%																								
1.5 Determine methodology for temporal and spatial upscaling/downscaling/averaging (SMEs and Jim Baird)	2014-07-15	2014-08-14	31	0%																								
2.0 Analysis (Sampling and validation)	2014-08-15	2014-11-14	92	0%																								
2.1 Create a sample monthly netCDF file for each Obs4MIPS-compliant CDR (Baird and SME)	2014-08-15	2014-09-14	31	0%																								
2.2 Independently compare sample output for scientific validation (SMEs and Baird)	2014-09-15	2014-10-14	30	0%																								
2.3 Validate that all metadata compliances are passed for sample files: CF, Obs4MIPS OMPs and CDR Metadata standards (Baird)	2014-10-15	2014-11-14	31	0%																								
3.0 Implementation (Code and documents)	2014-11-15	2015-02-28	106	0%																								
3.1 Produce Obs4MIPS CDRs for entire period of record (Baird and SMEs)	2014-11-15	2014-12-31	47	0%																								
3.2 Submit obs4MIPS Data Set Proposal Form (SMEs)	2015-01-01	2015-01-14	14	0%																								
3.3 Write Technical Note for each CDR (SMEs)	2015-01-01	2015-02-28	59	0%																								
4.0 Testing	2015-03-01	2015-04-30	61	0%																								
4.1 Test data scientifically (SMEs and Programmer)	2015-03-01	2015-03-31	31	0%																								
4.2 Test for monthly production (regular updates) of CDRs (within 10 days of succeeding month)	2015-03-15	2015-04-30	47	0%																								
5.0 Deployment (Archive)	2015-04-15	2015-10-31	209	0%																								
5.1 Complete Archive Request Form or ATRAC (SMEs, PM and Archive)	2015-04-15	2015-04-29	15	0%																								
5.2 Complete all Archive requirements (SMEs, PM and Archive)	2015-05-01	2015-07-31	92	0%																								
5.3 Serve CDRs via GFDL or NCDC ESG node (NCMADS-DAG)	2015-08-01	2015-08-31	31	0%																								
5.4 USCB Product Briefing (SMEs)	2015-09-01	2015-09-15	15	0%																								
5.5 Add Obs4MIPS project to CDRP website																												

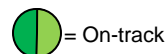
### Risk Matrix



### Risk and Mitigation

TBD

8/7/2014



PREDECISIONAL DRAFT INFORMATION

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# CDR Program Office

## UW HIRS Processing @ NCDC

Project Manager:  
A. Young

### Weekly Status Update

- Found space to temporarily store 10 TB of 10 yrs of product.
- Waiting for final code delivery from Wisconsin.
- Preparing plan for processing on CICS server.
- Working on finding space for the 10TB of input data (pixel level cloud data).

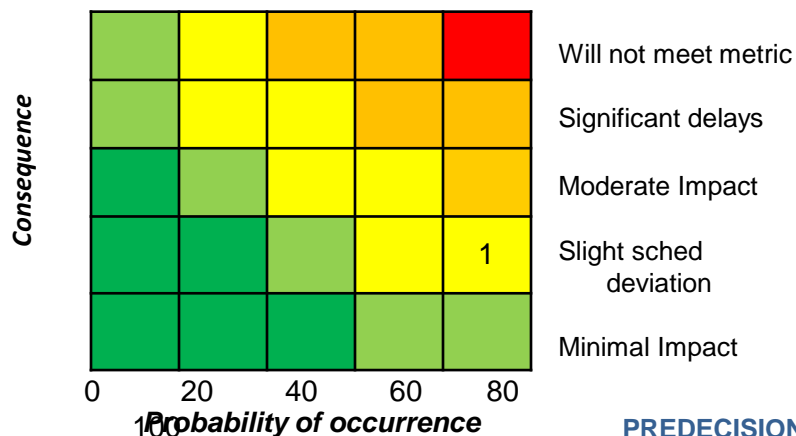
### Objectives

Produce global total precipitable water and cloud top pressure estimates from HIRS data using the UW algorithm (P. Menzel).

### Schedule

- Start Date TBD
- End Date TBD

### Risk Matrix

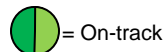


### Risk and Mitigation

1. Programmer was assigned to another task. Impact: Schedule may slip.

8/7/2014

PREDECISIONAL DRAFT INFORMATION



= On-track      = Potential management action required      = Management attention required



# CDR Program Office

## Albedo of the Americas

Project Manager:  
J. Matthews

### Weekly Status Update

- Continued validation via collaboration with SAMSI (at NCSU).
- Loaned 42 TB of disk space allocation to ISCCP Project

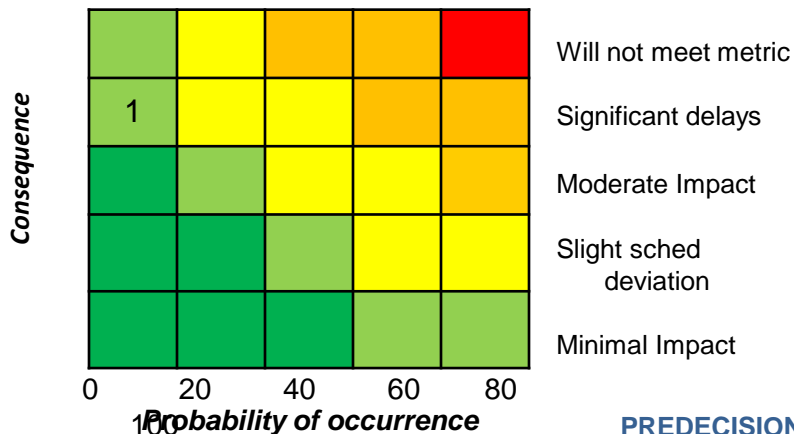
### Objectives

Produce a daily land surface albedo product over North and South America from GOES-GVAR observations for 1995-2014.

### Schedule

- Start Date January 2015
- End Date June 2016

### Risk Matrix

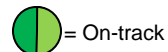


### Risk and Mitigation

- Loaned disk space is not returned
  - \* Could cause delays. Unlikely since more disk space is planned.

8/7/2014

PREDECISIONAL DRAFT INFORMATION



= On-track      = Potential management action required      = Management attention required